

The Relationship Between Gender, Education Level, and Age on Work Stress Public High School Teachers in Indonesia

La relación entre el género, el nivel educativo y la edad en el estrés laboral
Docentes de escuelas secundarias públicas en Indonesia

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SUMMARY

Introduction: Teaching is a challenging and difficult profession. Teaching is a high-stress job. This study aimed to determine work stress based on gender, age, and level of education in Palu City State Senior High School teachers.

Methods: Descriptive research was conducted from Jun 1 to Sep 29, 2020, in Palu City. The research population was 150 teachers from five senior high schools in Palu City. The research sample was 34 respondents using an accidental sampling technique. The job stress measurement questionnaire was conducted using a work stress assessment questionnaire from the Health and Safety Executive (HSE) with the scoring method.

DOI: <https://doi.org/10.47307/GMC.2022.130.s1.33>

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Recibido: 1 de mayo 2022

Aceptado: 8 de mayo 2022

The degree of stress is categorized as mild, moderate, and severe.

Results: The results showed that the respondents who experienced moderate stress were 31 respondents (91.2 %) and severe stress were three respondents (8.8 %). Respondents who experienced more stress were male, with as many as 18 respondents (52.9 %), with undergraduate education levels 18 respondents (52.9 %). Age of 41-45 years and 46-50 years also experienced more stress each as many as eight respondents (23.5 %).

Conclusion: This study suggests that identifying the factors that cause work stress on teachers at the school should be carried out. This effort can be made by asking the opinion of each teacher on everything related to the work environment, compensation policies, work regulations and procedures that have been set, the suitability of their work placements, the availability of work facilities, and other factors that are thought to cause stress at work.

Keywords: Age, education level, gender, teacher, work stress.

RESUMEN

Introducción: La enseñanza es una profesión desafiante y difícil. La enseñanza es un trabajo de mucho estrés. Este estudio tuvo como objetivo determinar el estrés laboral en función del género, la edad y el nivel de educación en los maestros de la escuela secundaria superior estatal de la ciudad de Palu.

Métodos: *La investigación descriptiva se realizó del 1 de junio al 29 de septiembre de 2020, en la ciudad de Palu. La población de investigación fue de 150 profesores de cinco escuelas secundarias superiores en la ciudad de Palu. La muestra de la investigación fue de 34 encuestados utilizando una técnica de muestreo accidental. El cuestionario de medición del estrés laboral se realizó utilizando un cuestionario de evaluación del estrés laboral del Health and Safety Executive (HSE) con el método de puntuación. El grado de estrés se clasifica en leve, moderado y severo.*

Resultados: *Los resultados mostraron que los encuestados que experimentaron estrés moderado fueron 31 encuestados (91,2 %) y estrés severo fueron tres encuestados (8,8 %). Los encuestados que experimentaron más estrés fueron hombres, con hasta 18 encuestados (52,9 %), con niveles de educación de pregrado 18 encuestados (52,9 %). La edad de 41 a 45 años y de 46 a 50 años también experimentaron más estrés cada uno hasta ocho encuestados (23,5 %).*

Conclusión: *Este estudio sugiere que se debe realizar la identificación de los factores que provocan estrés laboral en los docentes de la escuela. Este esfuerzo se puede realizar solicitando la opinión de cada docente sobre todo lo relacionado con el ambiente de trabajo, las políticas de compensación, los reglamentos y procedimientos de trabajo que se hayan establecido, la idoneidad de sus lugares de trabajo, la disponibilidad de instalaciones de trabajo y otros factores que se consideren causar estrés en el trabajo.*

Palabras clave: *Edad, nivel educativo, género, docente, estrés laboral.*

INTRODUCTION

One of the most significant occupational safety and health challenges is work-related stress (1-3). World Health Organization (WHO) states that work stress is a response that arises when the pressure and demands of work are not following the knowledge and expertise possessed by a person to make him feel challenged in overcoming work problems. Particular health outcomes are linked to workplace stress factors (1,4-7), such as fatigue (8), muscle pain (1,9), and cardiovascular disease (4). In addition, work stress can cause human resources (HR) to experience a decrease in performance and a decrease in work motivation, resulting in HR leaving their jobs (10-13).

Around 450 million people in the world experience stress. In Indonesia, it is recorded that around 10 % of the total population of Indonesia

experiences stress (14). Basic Health Research Data in 2013 stated that the prevalence of the Indonesian population in the population aged 15 years who experienced mental-emotional disorders or stress was 6.0 % or around 37 728 people. Around 1.33 million residents of DKI Jakarta Province experience stress, where this figure reaches 14 % of the total population, with acute stress levels reaching 1 %-3 % and severe stress reaching 7 %-10 %. In Central Java, 704 000 people were experiencing mental disorders, and of that number, around 96 000 people experienced insanity, and 608 000 people experienced stress. The province with the highest prevalence of mental-emotional disorders or stress was Central Sulawesi at 11.6 %, and the lowest was in Lampung at 1.2 % (15). Factors that can cause work stress are individual conditions such as age, gender, education, marital status, personality traits such as introvert or extrovert, emotional level, cognitive support such as social support, and social relations with the environment (16-18).

The teacher is a profession that plays a major role and has a significant and strategic position in education. Thus, it can be said that a teacher bears a tremendous moral responsibility and obligation because the teaching profession is more demanding to produce truly quality human resources (19). In Law Number 14 of 2005 concerning Teachers and Lecturers, teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating students in early childhood education through formal education, primary and secondary education (20).

Workplace stress has been documented in public high school teachers, according to earlier studies (9,21-23). Likewise, stress can occur in students (24-26). Arismunandar's (2008) research states that 30.27 % of 80 000 teachers suffer from stress at work. This means that the number of teachers who experience stress at work is 24 000 people. Stress at work will affect the performance of the teacher. The higher the level of stress experienced by the teacher, the productivity and performance of the teacher will decrease (27-30). Indriyani stated that the teacher's inability to deal with problems well, such as problems in the family, will cause conflicts at work which will affect work so that stress arises at work (27).

Given the size and severity of the problem of stress that occurs in high school teachers underlies this research. Therefore, this study aimed to determine work stress based on gender, age, and level of education in Palu City State Senior High School teachers.

METHODS

This descriptive research was conducted from Jun 1 to Sep 29, 2020, in Palu City. The population and sample in this study were high school teachers as many as 34 respondents. An accidental sampling technique was used. Based on data from the Ministry of Education and Culture of Central Sulawesi Province and data from five Palu City Public High Schools (SMAN) in 2020, the total number of respondents was 150 people teachers.

The work stress measurement questionnaire was conducted using a work stress assessment questionnaire from the Health and Safety Executive (HSE) with the scoring method. The questionnaire was assessed using 5 Likert scales (never, rarely, somewhat often, often, and always) from a list of 30 questions (31). The score range was $0 \leq$ area score ≤ 8 : non-relevant risk level; $9 \leq$ area score ≤ 17 : medium risk level; $18 \leq$ area score ≤ 26 : high-risk level (31). The ethical feasibility of the research was obtained from the Ethics Commission for Poltekkes, the Ministry of Health, Palu in 2020 with the number LB.01.01/KE-01/XXIV/591/2020 on May 16, 2020.

RESULTS

Of the 34 respondents to the study of work stress on public high school teachers in Palu, 52.9 % of the respondents were male, not much different from the number of female respondents. The age category is divided into seven categories, with the most categories being in the 41-45 years and 46-50 years age groups, each with 23.5 %. Respondents with undergraduate education were 52.9 % strata.

Table 1

Characteristics of Research Respondents' Work Stress on State High School Teachers in Palu City

Characteristics	n	%
Sex		
Man	18	52.9
Women	16	47.1
Age (years)		
26-30	3	8.8
31-35	1	2.9
36-40	6	17.6
41-45	8	23.5
46-50	8	23.5
51-55	5	14.7
56-60	3	8.8
Education Level		
Strata 1	18	52.9
Strata 2	16	47.1

Source: Primary Data 2020

Table 2 shows respondents who experienced moderate stress were 31 respondents (91.2 %), and among severe levels were three respondents (8.8 %).

Table 2

Stress Levels of Research Respondents Work Stress on State High School Teachers in Palu City

Stress Level	n	%
Medium	31	91.2
High	3	8.8

Source: Primary Data 2020

Based on Table 3, most of the respondents who experienced moderate work stress were male, with as many as 17 respondents with 94.4 %, and female respondents with as many as 14 respondents with a percentage of 87.5 %. On the other hand, respondents who experienced high stress were two female respondents with a percentage of 12.5 %, and one male respondent with a percentage of 5.6 %.

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Table 3
Stress Levels of Research Respondents based on the characteristics of State High School Teachers in Palu City

Characteristics	Medium Stress		High Stress		n
	n	%	n	%	
Sex					
Man	17	94.4	1	5.6	18
Women	14	87.5	2	12.5	16
Age (years)					
26-30	3	100.0	0	0	3
31-35	1	100.0	0	0	1
36-40	5	83.3	1	16.7	6
41-45	7	87.5	1	12.5	8
46-50	8	100.0	0	0	8
51-55	4	80.0	1	20.0	5
56-60	3	100.0	0	0	3
Education Level					
Strata 1	16	88.9	2	11.1	18
Strata 2	15	93.8	1	6.3	16
	31	91.2	3	8.8	34

Source: Primary Data 2020

Table 3 also shows that the age group that experienced moderate stress was 46-50 years old, namely eight respondents and 41-45 years old, where seven respondents (87.5 %) experienced stress. On the other hand, respondents who experienced high stress were 36-40 years old, 41-45 years old, and 51-60 years old.

Table 3 shows that most of those who experience moderate stress are respondents with a bachelor's degree education, as many as 16 respondents with a percentage of 88.9 %, and respondents with a bachelor's degree education, as many as 15 respondents with a percentage of 93.8 % while respondents who experience high stress are respondents with a bachelor's degree education. The respondents with strata 1 were 11.1 %, and respondents with strata 2 education were 6.3 %.

DISCUSSION

Teaching is a challenging profession and not too difficult (32). The current literature shows that being a teacher is a high-stress

job (33-35). It is often described as a negative emotion characterized by anger, anxiety, frustration or depression, fatigue, and difficulty concentrating (35-37).

Stressful conditions can cause changes in health conditions and may determine the onset of work-related stress. Based on the study results, most of those who experienced moderate stress were men with a percentage of 52.9 %, women with a percentage of 47.1 %, and who experienced high stress. There were two female respondents with a percentage of 12.5 %, while one male respondent. Men experience high stress with a percentage of 5.6 %. The results of this study are different from the results of Rizki's research (2017) (16), which shows that more female teachers experience work stress because generally, women prioritize feelings or emotions in dealing with something compared to men, who tend to use their minds or reason. In addition, women experience more stress because they have two roles, namely at home and at work. The dual role that must be carried out both as a housewife and as a teacher often triggers work stress. The Kivimäki study (2018) showed that in all women and men without cardiometabolic disease, the estimated relative risk for the work stress-mortality relationship was not significant (38). Another study by Sunindijo (2017) found that women suffer from more anxiety and acute stress symptoms than men. Still, no significant difference was seen between the sexes in the level of depression suffered (39).

Based on age characteristics, the results of this study indicate that the dominant age group experienced moderate stress, namely the age 41-45 years and the age 46-50 years. However, the older age factor usually has more experience and understanding of work, so age can be an obstacle and trigger stress in certain types of work.

The results of this study also found that most of those who experienced moderate stress were respondents with undergraduate education, as many as 16 respondents with a percentage of 88.9 %, and respondents with undergraduate education, as many as 15 respondents with a percentage of 93.8 % while respondents who experienced high stress were educated, respondents. Strata 1 has as many as two respondents with a percentage of 11.1 %, and respondents with strata 2 education

as many as 1 respondent with a percentage of 6.3 %. Education is a change in the attitude and behaviour of a person or group and an effort to mature a person through teaching and training efforts. The higher the education, the wider the knowledge is expected.

According to the researcher, the undergraduate and postgraduate education of high school teachers can improve the quality of graduate students to create a quality next generation. However, the heavy demands of a teacher's duties, such as those who teach at high schools, cause teachers to experience boredom and often lead to stress. Teachers will tend to experience stress if they cannot adapt between desires and existing realities, both inside and outside of themselves. All kinds of stress, basically caused by the lack of understanding of human beings, will have their limitations. The inability to fight these limitations will lead to frustration, conflict, anxiety, and guilt. Therefore, stress and its consequences can be reduced and prevented through accurate identification of its source (37).

Developments in education require the teaching profession to continue to work to a certain level which causes stress. This study found that gender, age, and education level varied in the description of stress levels for high school teachers in Palu City.

This research has important implications for the prevention of stress in teachers. Stress levels and their consequences can be reduced and prevented by accurately identifying their source, with positive effects on individual and organizational health. This study suggests that identifying the factors that cause work stress on teachers at the school should be carried out. This effort can be made by asking the opinion of each teacher on everything related to the work environment, compensation policies, work regulations and procedures that have been set, the suitability of their work placements, the availability of work facilities, and other factors that are thought to cause stress at work.

CONCLUSION

Gender, age, and education level vary in providing an overview of stress levels for

high school teachers in Palu City. This study suggests that identifying the factors that cause work stress on teachers at the school should be carried out. This effort can be made by asking the opinion of each teacher on everything related to the work environment, compensation policies, work regulations and procedures that have been set, the suitability of their work placements, the availability of work facilities, and other factors that are thought to cause stress at work.

ACKNOWLEDGMENTS

The authors thank the Director of Health Polytechnic of Health Ministry Palu for funding research publications. To Fahmi Hafid, who has been pleased to review and direct the writing and publication of this article.

CONFLICTS OF INTEREST

According to the writers, there are no conflicts of interest with any party, including all Palu City teachers and teacher groups.

FUNDING

This publication receives funding from Poltekkes Kemenkes Palu grant number 024-12-632331- 064 publication program in 2022.

REFERENCES

1. Marcatto F, Colautti L, Filon FL, Luis O, Di Blas L, Cavallero C, et al. Work-related stress risk factors and health outcomes in public sector employees. *Saf Sci*. 2016;89:274-278.
2. Damayanti R, Kusuma Wardhani RW, Putri BD, Lutfiya I. Job Stress, Workload, Exercise Habits And Metabolic Syndrome In Academic Personnel At Airlangga University. *Malaysian J Public Heal Med*. 2020;20(2):276-284.
3. Sandianto S, Tualeka AR, Indriani D. The effect of workload on the job stress of nurses in outpatient care unit of public hospital Surabaya, Indonesia. *Indian J Public Heal Res Dev*. 2018;9(1):80-84.
4. Kivimäki M, Kawachi I. Work stress is a risk factor for cardiovascular disease. *Curr Cardiol Rep*. 2015;17(9):1-9.

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5. Hensel JM, Ruiz C, Finney C, Dewa CS. Meta-analysis of risk factors for secondary traumatic stress in therapeutic work with trauma victims. *J Trauma Stress*. 2015;28(2):83-91.
6. Magnavita N, Capitanelli I, Garbarino S, Pira E. Work-related stress as a cardiovascular risk factor in police officers: A systematic review of evidence. *Int Arch Occup Environ Health*. 2018;91(4):377-389.
7. Lukan J, Bolliger L, Pauwels NS, Luštrek M, Bacquer D De, Clays E. Work environment risk factors causing day-to-day stress in occupational settings: A systematic review. *BMC Public Health*. 2022;22(1):1-13.
8. Useche S, Cendales B, Gómez V. Work stress, fatigue and risk behaviors at the wheel: Data to assess the association between psychosocial work factors and risky driving on Bus Rapid Transit drivers. *Data Br*. 2017;15:335-339.
9. Putri M, SPAR, Djayanti F. Risk factor analysis of work stress and muscle pain among high school teachers in Makassar. *Enfermería Clínica*. 2020;30:444-448.
10. Saidah N, Ekawati E, Widjasena B. Faktor-Faktor Yang Berhubungan dengan Stres Kerja pada Staf Administrasi Ruang di RSUD KRMT Wongsonegoro Kota Semarang. *J Kesehat Masy*. 2018;6(2):94-102.
11. Setiawan HW, Pratiwi IN, Nimah L, Pawanis Z, Bakhtiar A, Fauzini G, et al. Challenges for Healthcare Workers Caring for COVID-19 Patients in Indonesia: A Qualitative Study. *Inq J Heal Care Organ Provision, Financ*. 2021;58:00469580211060291.
12. Aulia SF, Alayannur PA, Dwiyantri E, Martiana T, Arini SY. Correlation between workload and work environment with work stress. *Indian J Forensic Med Toxicol*. 2021;15(1):1846-1852.
13. Prasetyo A, Martiana T, Melaniani RS, Rahman FS. The differences of individual characteristics and working environment that influence job stress on female and male workers at pt. X sidoarjo (using gender perspective). *Indian J Forensic Med Toxicol*. 2020;14(3):1007-1012.
14. Perwitasari DT. Faktor-faktor yang mempengaruhi tingkatan stres pada tenaga kesehatan di RS Universitas Tanjungpura Pontianak Tahun 2015. *J Mhs PSPD FK Univ Tanjungpura*. 2016;2(3).
15. Jundillah ZN. Analisis kejadian stres kerja pada perawat di Kabupaten Konawe Kepulauan Tahun 2017. *Haluoleo University*; 2017.
16. Amalia BR, Wahyuni I, Ekawati E. Hubungan Antara Karakteristik Individu, Beban Kerja Mental, Pengembangan Karir Dan Hubungan Interpersonal Dengan Stres Kerja Pada Guru Di SIB Negeri Semarang. *J Kesehat Masy*. 2017;5(5).
17. Safrizal HBA, Eliyana A, Febriyanti KL. The effect of double role conflict (work family conflict) on female worker's performance with work stress as the intervening variable. *Syst Rev Pharm*. 2020;11(10):418-428.
18. Faiza RN, Fauziah SM, Tualeka AR. The relation between job tenure and social support period of coworkers and superiors with work stress on aircraft maintenance officer at airlines company. In: *Summer Crash Course: Environmental and Occupational Health Seminar (SEOH) 2018*. 2018.p.23.
19. Putranto C. Faktor-Faktor Yang Mempengaruhi Stres Kerja: Studi Indigenous Pada Guru Bersuku Jawa. *J Soc Ind Psychol*. 2013;2(2).
20. Darmadi H. Tugas, peran, kompetensi, dan tanggung jawab menjadi guru profesional. *Edukasi J Pendidik*. 2016;13(2):161-174.
21. Febriantina S, Aliyyah RR. How School Culture and Teacher's Work Stress Impact on Teacher's Job Satisfaction. *Int J Learn Teach Educ Res*. 2020;19(8):409-423.
22. Riezebos J, Huisman B. Value stream mapping in education: Addressing work stress. *Int J Qual Reliab Manag*. 2021;38(4):1044-1061.
23. Zainudina SN, Matoreb MEEM, Norhashidah Md Ghanic, Adnand RM SJ. Relationship between work stress and burnout among high school Special Education Teachers. *Int J Innov Creat Chang*. 2019;7(6):312-2.
24. Karyotaki E, Cuijpers P, Albor Y, Alonso J, Auerbach RP, Bantjes J, et al. Sources of stress and their associations with mental disorders among college students: results of the world health organization world mental health surveys international college student initiative. *Front Psychol*. 2020;1759.
25. Wu J-R, Kesselmayr RF, Smedema SM, Chen X, Lee B, Rumrill S, et al. Psychometric properties of the World Health Organization Disability Assessment Schedule in people with multiple sclerosis. *J Vocat Rehabil*. 2020;52(2):185-194.
26. Lachein B, Chashchin VP, Zhukova DY, Korzinina IA. Self-assessment of occupational stress and workability in the implementation of the world health organization's global strategy "health for all" at the workplace level in modern machinery companies. *Gig I Sanit*. 2019;6(6):677-681.
27. Muhbar F, Rochmawati DH. Hubungan Antara Tingkat Stres Dengan Beban Kerja Guru di Sekolah Luar Biasa. *J Keperawatan Jiwa Persat Perawat Nas Indones*. 2019;5(2):82-86.
28. Alda RR, Utomo B, Hasan H. Correlation between Stress Level and Learning Motivation of Pre-Clinical Medical Student in Faculty of Medicine Universitas Airlangga. *JUXTAJ Ilm Mhs Kedokt Univ Airlangga*. 2020;11(1):18-22.
29. Rasyidah QA, Fitriyanti R, Wahyudi AS. A Relationship Between Stress Level And Burnout

- Syndrome With Sleep Quality On Clinical Nursing Students In Faculty Of Nursing Universitas Airlangga. *Psychiatry Nurs J (Jurnal Keperawatan Jiwa)*. 2020;2(1):16-25.
30. Puspitasari DA, Handayani MM. Hubungan tingkat self-efficacy guru dengan tingkat burnout pada guru sekolah inklusif di Surabaya. *J Psikol Pendidik dan Perkemb*. 2014;3(1):59-68.
 31. Corradini I, Marano A, Nardelli E. Work-related stress risk assessment: a methodological analysis based on psychometric principles of an objective tool. *SAGE Open*. 2016;6(3):2158244016666888.
 32. Kim J, Shin Y, Tsukayama E, Park D. Stress mindset predicts job turnover among preschool teachers. *J Sch Psychol*. 2020;78:13-22.
 33. Antoniou A-S, Ploumpi A, Ntalla M. Occupational stress and professional burnout in teachers of primary and secondary education: The role of coping strategies. *Psychology*. 2013;4(03):349.
 34. Zurlo MC, Pes D, Capasso R. Teacher stress questionnaire: Validity and reliability study in Italy. *Psychol Rep*. 2013;113(2):490-517.
 35. Cascio MI, Magnano P, Elastico S, Costantino V, Zapparrata V, Battiato A. The relationship among self-efficacy beliefs, external locus of control and work stress in public setting schoolteachers. *Open J Soc Sci*. 2014;2(11):149.
 36. Hepburn A, Brown SD. Teacher stress and the management of accountability. *Hum Relations*. 2001;54(6):691-715.
 37. De Simone S, Cicotto G, Lampis J. Occupational stress, job satisfaction and physical health in teachers. *Eur Rev Appl Psychol*. 2016;66(2):65-77.
 38. Kivimäki M, Pentti J, Ferrie JE, Batty GD, Nyberg ST, Jokela M, et al. Work stress and risk of death in men and women with and without cardiometabolic disease: a multicohort study. *Lancet Diabetes Endocrinol*. 2018;6(9):705-713.
 39. Sunindijo RY, Kamardeen I. Work stress is a threat to gender diversity in the construction industry. *J Constr Eng Manag*. 2017;143(10):4017073.